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A SIMPLE OPERATION FOR
DIVERGENT STRABISMUS



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All ophthalmic surgeons have been more or less disappointed in the results obtained from the various operations now in vogue for this deformity. The fact that so many operations have been devised for its correction speaks for the failure of the various methods. Having had unusual opportunities for putting the accepted methods to a test and noting the difficulties and many failures ordinarily experienced, I have for the last eight years followed a method which has been more uniformly successful in my hands than any other.

I shall not attempt to describe the various operations which might be called the standard methods; that would be too tedious to a body of gentlemen who have had such varied experiences as the majority of the members. This operation, which has given me such good results, has been developed on lines laid down by De Wecker, Grandelement and Panas. It appeals to me as being much simpler than either of the above. It is in cases where the deviation is five millimeters and upward that this operation is best adapted.

The operation is divided into three parts and is performed under cocain: 1, tenotomy of both external recti muscles and stretching of conjunctiva and Tenon's capsule; 2, making the elliptic opening either on one eye or both; 3, suturing this opening.

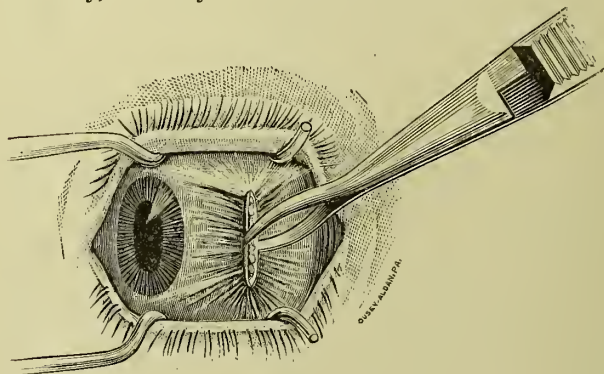
The details of operation are carried out as follows:

1. Tenotomy of both external recti muscles, making an opening through the conjunctiva, over the insertion of the tendons. I then stretch Tenon's capsule until the cornea is well into the inner canthus—this is done on both eyes. Panas' method is to insert the hook under the muscle and apply pronounced traction, at the same time burying the cornea in the outer or inner canthus. The operation is performed under ether or chloroform, while in this method cocain is only used. The stretching of Tenon's capsule is an important part of the operation. My method is as follows: The strabismus hook, which is a large one, flat on its side, is inserted in the opened conjunctiva and Tenon's capsule and with considerable traction all the tissues are stretched inward until the cornea is buried in the inner canthus. The stretching of the upper tissue has, as can be readily understood, a tendency to rotate the eyeball to a certain degree and

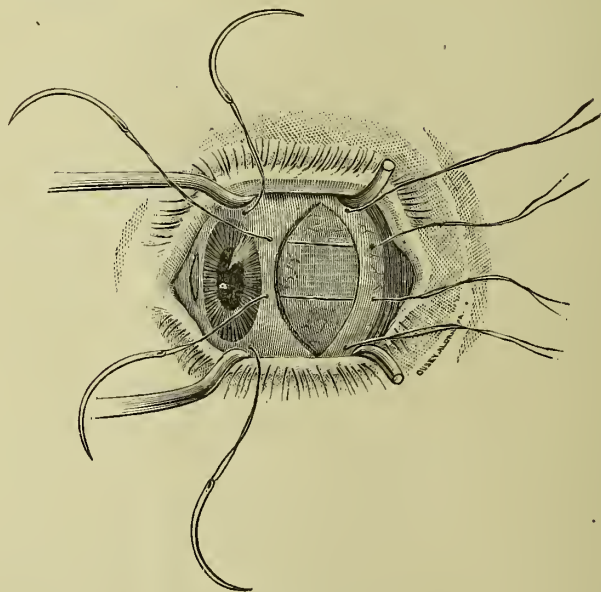
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leave the conjunctiva and Tenon's capsule intact below; to equalize the stretching, the point of the hook is reversed, and the lower conjunctiva and capsule stretched. In Panas' method the hook being placed under the external or internal muscle prevents rotation of eyeball.

2. With the retractor forceps I grasp the conjunctiva vertically, midway between the cornea and caruncle



No. 1.



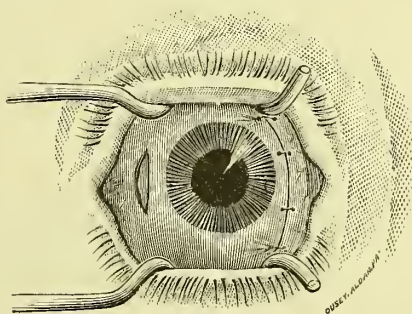
No. 2.

and directly over the internal muscle, and draw upward the conjunctiva and as much of Tenon's capsule as I can. I raise the forceps two or three times to take up as much of the redundant tissue as my judgment dictates, and by this means one apparently is always successful in separating conjunctiva and overlying tissue from the muscle, if it be still present; then with curved scissors

I cut with one long sweep the upraised conjunctiva and capsule close to the eyeball, making an elliptic opening, exposing, at times, the attenuated muscle, and, if no muscle be present, then the clear sclerotic.

This opening now extends in a vertical direction, beginning below the lower level of the cornea to a point above the same, its width over the muscle is about one full centimeter at its greatest diameter. The conjunctiva is then separated around this elliptic wound from its subconjunctival tissues at all points, even around the cornea if possible.

3. The elliptic opening is brought together with four sutures; the upper suture is inserted through conjunctiva and Tenon's capsule and across under conjunctiva and Tenon's capsule midway between the insertion of the superior rectus muscle and the margin of the cornea; a similar suture is passed through the lower margin of the conjunctiva and brought out midway between the insertion of the inferior muscle and the margin of the



No. 3.

cornea; this thread is then tied and in like manner the upper thread; two more sutures are passed through the margin of the lips of the wound and united.

This constitutes the details of the operation. The object of the operator should be to produce one to four millimeters of convergence, which disappears during cicatrization. When the defect is not more than two or three millimeters I have performed an external tenotomy on both and stretched Tenon's capsule, with excellent results, without taking out the elliptic section, especially in those cases where the eyes could be held by the patient at fixed convergence at ten inches.

While this operation is similar in many details to that of De Wecker, Knapp, Snellen, Gruening and Grand-clement, yet I am sure its simplicity has much to commend it, and the results obtained in my hands make it preferable to any one of the above-mentioned methods.

NOTE.—I refer the reader to Dr. St. John Roosa's article in *The Postgraduate*, November, 1899.

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Fig. 1.—Before and after operation.



Fig. 2.—Before and after operation.



Fig. 3.—Before and after operation.



Fig. 1—Before and after operation.



Fig. 5.—Before and after operation.